Artificial Intelligence (COMP/EECE 7720/8720)
Spring 2018

Instructor: Bonny Banerjee, Ph.D.

Contact Information:
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Office Hours: Just after class or by appointment

When: TR 11:20 am-12:45 pm
Where: Engineering Science Bldg. Room 218

Course Description (from catalog)**:**
Central issues of artificial intelligence, including game playing, planning, machine learning, common-sense reasoning, perception and action; implementations in LISP. PREREQUISITE: COMP/EECE 6720.

Required Text:
"Artificial Intelligence: A Modern Approach" by Stuart Russell and Peter Norvig

Syllabus:
Introduction to a computational approach to artificial intelligence, uncertain knowledge and reasoning (quantifying uncertainty, probabilistic reasoning, probabilistic reasoning over time, making simple decisions, making complex decisions), and learning (learning from examples, knowledge in learning, learning probabilistic models, reinforcement learning).

Tentative schedule:
Week 1 (1/16). Introductory material (selected material from Chapters 1, 2)
Weeks 2,3 (1/23). Quantifying uncertainty (Chapter 13)
Weeks 3,4 (2/1). Probabilistic reasoning (Chapter 14), (2/6) Project proposal due
Weeks 5,6 (2/13). Probabilistic reasoning over time (Chapter 15)
Weeks 6,7 (2/22). Making simple decisions (Chapter 16)
Week 8 (3/6). Spring break
Weeks 9,10 (3/13). Making complex decisions (Chapter 17), (3/15) Midterm
Week 11 (3/27). Learning from examples (Chapter 18)
Week 12 (4/3). Knowledge in learning (Chapter 19)
Week 13 (4/10). Learning probabilistic models (Chapter 20)
Week 14 (4/17). Reinforcement learning (Chapter 21),
Week 15 (4/24). Project presentations. Final project reports are due by email by 4/24/18.
Final exam is on Thursday 5/3/18 during 8:00-10:00 am

Evaluation and Final Grades:

Grading: Homeworks 20%, Presentation 10%, Midterm 20%, Final 20%, Project 20%, Class participation 10%. The 7720 and 8720 sections will be graded separately. In each exam, the students enrolled for 8720 will have to answer one more question.